

QUALITY MANAGEMENT OFFICE (QMO)
CONDUCT OF OPERATIONS (CONOPS) OVERVIEW

IMPLEMENTATION OF DOE ORDER 5480.19
“CONDUCT OF OPERATIONS FOR DOE FACILITIES”

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QMO/CONOPS RESPONSIBILITIES INCLUDE:

- S DEVELOP AND MAINTAIN BNL CONOPS STANDARDS, POLICY, PROGRAM, AND PROCEDURES (BNL OPERATIONS & MAINTENANCE MANUAL)**
- PROVIDE GUIDANCE AND TRAINING**
 - ASSIST DEPT./DIV. IN PREPARING, IMPLEMENTING AND IMPROVING THEIR CONOPS PROGRAMS, INCLUDING MATRICES**
- REVIEW AND VERIFY IMPLEMENTATION OF DEPT./DIV. CONOPS PROGRAMS**
 - DEVELOP LESSONS-LEARNED**
- PARTICIPATE IN FORMAL REVIEW OF MATRICES**

CONOPS REPRESENTATIVES (CONOPS REPS)
RESPONSIBILITIES INCLUDE:

- S PRINCIPLE DEPT./DIV. LIAISON WITH THE QMO**
- S ASSIST IN DEVELOPING/REVISING CONOPS PROGRAMS AND/OR MATRICES**
- S PERFORM SELF-ASSESSMENTS (TIER I REVIEW PROCESS, IE. SAFETY/QA/CONOPS)**
- S MONITOR ACTIONS TO BRING OUTSTANDING ISSUES INTO AGREEMENT WITH PROGRAM GUIDELINES**

WHAT ARE THE CONOPS REQUIREMENTS?

- **MANAGE, ORGANIZE, AND CONDUCT BNL OPERATIONS/FACILITIES IN A SAFE AND RELIABLE MANNER**
- **DEVELOP AND INSTITUTE POLICIES AND PROCEDURES TO DOCUMENT & CONTROL THE CONDUCT OF OPERATIONS AT SELECTED OPERATIONS/FACILITIES**

WHAT ARE THE CONOPS REQUIREMENTS? (Cont.)

- **DOE ORDER (5480.19), Section 5.C Requirements**
 - **DOCUMENT CONFORMANCE WITH ORDER**
 - **A SEPARATE MANUAL/PLAN NOT NECESSARY**
 - **AS A MINIMUM, A DOCUMENT (E.G., A MATRIX) SHALL BE PREPARED THAT:**
 - **INDICATES WHICH GUIDELINES APPLY TO A FACILITY;**

WHAT ARE THE CONOPS REQUIREMENTS? (Cont.)

- SHOWS CORRELATION OF ORDER GUIDELINES TO BNL'S EXISTING POLICIES AND PROCEDURES; AND**
- IDENTIFIES DEVIATIONS OR EXEMPTIONS FROM THE GUIDELINES.**
- THIS DOCUMENT IS FORMALLY SUBMITTED TO THE DOE BROOKHAVEN GROUP (BHG).**

WHAT IS “GRADED APPROACH”?

A PROCESS THAT PROVIDES FOR THE APPLICATION OF MANAGEMENT CONTROLS, DOCUMENTATION AND ACTIONS THAT ARE COMMENSURATE WITH AN ITEM’S OR ACTIVITY’S POTENTIAL TO:

- A. CREATE AN ENVIRONMENTAL, SAFETY, OR HEALTH HAZARD;**
- B. INCUR A MONETARY LOSS DUE TO DAMAGE, OR TO REPAIR/REWORK/SCRAP COSTS;**
- C. REDUCE THE AVAILABILITY OF A FACILITY OR EQUIPMENT;**
- D. ADVERSELY AFFECT THE PROGRAM OBJECTIVE OR DEGRADE DATA QUALITY.**
- E. UNFAVORABLY IMPACT THE PUBLIC’S PERCEPTION OF THE BNL/DOE MISSION.**

*Ref: BNL-QAG-101, Rev. E, p.3 “GRADED APPROACH”

COMPLYING WITH THE ORDER

- CONOPS MATRIX

--- DOCUMENTED CONOPS CONFORMANCE MATRIX FOR SELECT FACILITIES*

SELECTION CRITERIA

- S FACILITIES WITH SIGNIFICANT SAFETY
ISSUES; I.E. FORMAL SAFETY ANALYSES
SAR'S OR SAD's)**
- S FACILITIES THAT REQUIRE HIGH
RELIABILITY (UTILITIES) WHOSE FAILURE
WOULD IMPACT LAB OPERATIONS**
- S SELECTED FACILITIES IDENTIFIED**

*Ref: BNL-O&M-1-01, Conduct of Operations Implementation of DOE Order 5480.19, Para. 7.1.1
BNL-O&M-1-01, Para. 4.2 & 4.3

	Dept.	Division or Department or Facility	Date of Matrix	Status of Facility (active, inactive, decommissioned)	Reviewed in '96-'97 Self-Assessment
1	AD	AGS/BOOSTER	1/92	Active	10/96
2	BO	CONTROLLED ENVIRONMENT RADIATION (CERF)	6/93	Active	
3	CCD	DATA CENTER FACILITY (DCF)	3/94	Active	
4	CCD	TELEPHONE SWITCH	5/94	Active	
5	CO	CYCLOTRONS JSW40 & 60 INCH FAC.	3/94	Active	8/96
6	CO	2 MEV VAN DE GRAFF FACILITY	3/94	Active	
7	CO	ACCELERATOR VAULT FACILITY	11/96	Active	
8	CO	MAGNETIC RESONANCE IMAGING FAC.	1/97	Active	
9	DAS	DYNAMITRON FACILITY	6/93	Active	
10	DAS	SUPER HIGH INTENSITY PROSITON FACILITY	3/93	Active	10/96
11	DAT	Co60 GAMMA POOL	4/94	Active	
12	DAT	HIGH TEMP COMBUSTION FAC.	9/94	Active	
13	DAT	METALLURGY HOT CELLS	3/94	Active	
14	DAT	NEUTRAL BEAM TEST FACILITY	6/93	Inactive	
15	DAT	RADIATION EFFECTS FACILITY	6/93	Inactive	
16	EP	CENTRAL CHILLED WATER FACILITY	3/94	Active	11/96
17	EP	CENTRAL STEAM FACILITY	3/94	Active	
18	EP	ELECTRIC FACILITY	3/95	Active	
19	EP	WASTE WATER TREATMENT FACILITY	1/95	Active	
20	EP	WATER TREATMENT FACILITY	1/95	Active	
21	FSD	MANAGEMENT INFORMATION SYSTEM FACILITY	3/94	Active	
22	INSTR	SOLID STATE GAMMA-RAY IRRADIATION FACILITY	8/93	Active	10/96
23	MO	BROOKHAVEN LINAC ISOTOPE PROD (BLIP)	2/96	Active	
24	MO	EPITHERMAL TREATMENT PORT (SEE RO/BMRR)	N/A	Active	
25	MO	INELASTIC NEUTRON SCATTERING (INS)	11/94	Active	
26	MO	INHALATION TOXICOLOGY FACILITY	N/A ?	Decommissioned	
27	MO	MAXITRON X-RAY FACILITY	3/94	Decommissioned	
28	MO	PROMPT GAMMA NEUTRON ACTIVATION (PGNA)	11/94	Active	
29	MO	DELAYED GAMMA NEUTRON ACTIVATION (DGNA)	11/94	Active	
30	MO	RADIATION THERAPY FACILITY (RTF)	11/94	Active	9/96
31	MO	TARGET PROCESSING LABORATORY (TPL)	9/96	Active	
32	NSLS	NSLS	9/92	Active	11/96
33	NSLS	NSLS-ATF	6/93	Active	11/96
34	PO	TANDEM VAN DE GRAFF	3/94	Active	
35	RO	COLD NEUTRON FAC (CNF)	6/92	Active	12/96
36	RO	HIGH FLUX BEAM REACTOR (March 29)	10/91	Active	12/96
37	RO	MED RES REACTOR (BMRR)[INCLUDES EPITHERMAL TREAT PORT]	7/92	Active	12/96
38	RP	RHIC	T.B.D.	Inactive	11/96
39	SE	LIVE FIRE RANGE	11/94	Active	
40	SEP	CALIBRATION FACILITY	9/94	Active	
41	SEP	HAZARDOUS WASTE FACILITY	8/95	Active	
42	SEP	SITE FIRE ALARM SYSTEM	10/94	Active	8/96

COMPLYING WITH THE ORDER (Cont.)

- CONOPS CHECKLISTS***
 - APPLIES TO DEPT./DIV. AREAS HAVING SOME OPERATIONAL OR ES&H RISKS(I.E. BENCHTOP LABORATORY, WATER TREATMENT FACILITY)**
 - USE LESS RIGOROUS CHECKLIST TO DETERMINE GUIDELINE APPLICABILITY**
 - EXTENSIVE DOCUMENTATION AND FORMAL REVIEW IS NOT REQUIRED (MAINTAIN COMPLETE CHECKLIST ON FILE).**

*Ref: BNL-O&M-I-01, Conduct of Operations Implementation of DOE Order 5480.19, Para. 7.1.2

WHAT MUST BE DONE?

-- WHAT IS A “CONDUCT OF OPERATIONS CONFORMANCE MATRIX?”*

A DOCUMENT SHOWING RESULTS OF THE EVALUATION OF A FACILITY’S OPERATIONAL POLICIES AND PRACTICES AGAINST THE ORDER GUIDELINES (DOE ORDER 5480.19) AND/OR OTHER APPROPRIATE STANDARDS)

*Ref: BNL-O&M-I-01, Para. 6.1

CONOPS MATRIX FORMAT

THE BNL CONOPS MATRIX HAS THREE COLUMNS:

- GUIDELINE**
Contains a summary of the guideline which must be addressed.
- PERFORMANCE**
Describe how the guideline applies and how you are implementing it. If it doesn't apply, refer to section below. If actions are underway to comply with guidelines, state specific commitments with dates.
- EXCEPTIONS & DEVIATIONS**
If you take exception to guideline list the reasons why items do not apply either in part or total.
 - If your program deviates from guidelines and you determine you should comply, state corrective actions and dates.

Ref: BNL-O&M-I-02, Conduct of Operations Conformance Matrices (Self-Assessments) Para. 6.1.1

CONOPS CONFORMANCE MATRIX PROCESS

A. NEW MATRIX - INITIAL EVALUATION OF FACILITY AGAINST GUIDELINES IS PERFORMED BY THE DEPT. COMMITTEE, WHICH MAY INCLUDE

- S CONOPS COORDINATOR**
- S DEPT./DIV. ES&H REVIEW COMMITTEE**
- S OTHERS AS APPROPRIATE (IE. FACILITY SUPERVISOR)**

1. MATRIX COMPLETION*

--- COMPARE CURRENT PRACTICES AGAINST ORDER GUIDELINES AND IDENTIFY DEFICIENCIES

2. ESTABLISH CORRECTIVE ACTIONS

--- USE GRADED APPROACH TO PRIORITIZE
--- FOLLOW-UP TO ASSURE CLOSURE

*Ref: BNL-O&M-I-02, Paragraphs 6.1, 6.2, & 6.3

CONOPS CONFORMANCE MATRIX PROCESS (Cont.)

- 3. MATRIX IS SUBMITTED TO THE QMO FOR REVIEW**
- 4. THE ASSISTANT DIRECTOR FOR MANAGEMENT AND PHYSICAL PLANT (ADMPP) APPOINTS A BNL CONOPS REVIEW COMMITTEE.**
- 5. BNL CONOPS COMMITTEE RECOMMENDS APPROVAL AFTER MATRIX REVIEW AND RESOLVING ANY COMMENTS.**
- 6. THE ADMPP HAS FINAL BNL APPROVAL.**

Ref: BNL-O&M-I-02, Conduct of Operations Conformance Matrices (Self-Assessments), Para. 6.2

CONOPS CONFORMANCE MATRIX PROCESS (Cont.)

- 7. MATRICES WILL BE SENT TO THE DOE BROOKHAVEN GROUP OFFICE FOR COMMENTS AND/OR CONCURRENCE.**
- 8. DOE BHG COMMENTS IF ANY, ARE FORWARDED TO QMO. THE QMO COORDINATES WITH DEPT./DIV. TO RESOLVE DOE/BHG COMMENTS.**

Ref: BNL-O&M-I-02, Conduct of Operations Conformance Matrices (Self-Assessments), Para. 6.3

CONOPS CHECKLIST FORMAT

THE BNL CONOPS CHECKLIST HAS THREE MAIN AREAS:

QUESTIONS, COLUMN 1 - CONSIDER THESE QUESTIONS BASED ON DOE ORDER GUIDELINES

RESPONSES, CENTER COLUMNS - PROVIDE RESPONSE TO QUESTIONS IN COLUMN 1

NOT APPLICABLE - QUESTION NOT APPLICABLE TO OPERATION. DOCUMENTATION OF REASON NOT NECESSARY, HOWEVER MANAGEMENT SHOULD BE AWARE OF THE RATIONALE.

SATISFACTORY - CURRENT PERFORMANCE ACCEPTABLE. CONSIDER INCLUDING A LIST OF RELATED POLICIES AND PROCEDURES WHICH ADDRESS THE GUIDELINE, FOR FUTURE REFERENCE .

NEEDS IMPROVEMENT - CORRECTIVE ACTIONS NECESSARY TO ENHANCE PERFORMANCE IN RESPONSE TO GUIDELINES.

NEEDS TO BE DEVELOPED - CURRENTLY NO EXISTING POLICES OR PROCEDURES. THEIR DEVELOPMENT IS WARRANTED.

COMMENTS OR PLANNED ACTIONS, LAST COLUMN - REFERENCE RELATED POLICIES AND PROCEDURES, PROPOSED CORRECTIVE ACTIONS, OR OTHER CLARIFYING COMMENTS.

TRAINING (BOTTOM OF PAGE) - IF THE ASSESSMENT GROUP DETERMINES ADDITIONAL TRAINING IS REQUIRED AND/OR THAT APPLICABLE TRAINING EXISTS, THIS SHOULD BE DOCUMENTED. A SECTION IS PROVIDED AT THE END OF THE CHAPTER AT THE BOTTOM OF THE PAGE FOR THIS PURPOSE.

CONOPS CHECKLIST PROCESS

GROUPING OF OPERATIONS - SIMILAR DEPARTMENTAL FUNCTIONS CAN BE GROUPED TOGETHER. FOR EXAMPLE GROUPING OF EXPERIMENTAL LABS DOING SIMILAR WORK (I.E. LASER LABS) WOULD BE APPROPRIATE.

OPERATIONS/FUNCTIONS NOT REQUIRING CHECKLISTS

PURELY ADMINISTRATIVE AREAS DO NOT REQUIRE A CHECKLIST. COMPLETION OF THE CHECKLIST IS NOT NECESSARY IF DEPARTMENTS FUNCTIONS BEING REVIEWED ARE ADEQUATELY COVERED BY EXISTING LAB POLICIES AND PROCEDURES, SEAPPM'S, QUALITY ASSURANCE PLANS, AND TRAINING PLANS, ETC.

REVIEW OF CONOPS CHECKLISTS

DEPARTMENT RESPONSIBLE FOR INTERNAL REVIEW/APPROVAL OF CONOPS CHECKLISTS. TYPICALLY THE CONOPS COORDINATOR, DEPT/DIV ES&H REVIEW COMMITTEE, QUALITY REPRESENTATIVE (QR), OR OTHERS, MAY BE ASSIGNED THIS RESPONSIBILITY.

COMPLETED CHECKLISTS

ONCE REVIEWED AND APPROVED COPIES SHOULD BE KEPT WITH OTHER DEPT CONOPS INFORMATION. AN INFORMATION COPY SHALL BE SENT THE QUALITY MANAGEMENT OFFICE (QMO).

CONDUCT OF OPERATIONS
CHECKLIST STATUS

6/10/97

	Dept.	Division or Department or Facility	Grouping	COO Check List
1	AD	COO for remainder of AGS	Received	INCLUDED IN COO MATRIX
2	BO	COO for remainder Biology	Received	COMPLETED
3	CCD	COO for remainder of Computer/Communications Div.	Received	Ed McFadden 4188 - TBD
4	CO	COO for remainder of Chemistry	Received	COMPLETED
5	DAS	COO for remainder of Dept. of Applied Science	Received	COMPLETED
6	DAT	COO for remainder of Department of Applied Technology	Received	COMPLETED
7	DO - OER	OFFICE of ENVIRONMENTAL RESTORATION	Received	COMPLETED
8	DCP	CONTRACTS AND PROCUREMENT	Received	COMPLETED
9	S&M	Compressed Gas Cylinder Warehouse	Received	COMPLETED
10	S&M	Administrative Area (balance of SM)	Received	COMPLETE
11	HR	HUMAN RESOURCES	Received	COMPLETED
12	EP	COO for remainder of Plant Engineering	Received	COMPLETED - waiting for Summary Report
13	MIS	COO for remainder of Management Information System	Received	COMPLETED
14	MO	COO for Medical Department	Received	COMPLETED
15	NSLS	COO for remainder of NSLS - Covered under Phase I	Users Excluded	INCLUDED IN COO MATRIX
16	OER	OFFICE of ENVIRONMENTAL RESTORATION	OPEN	COMPLETED
17	PO	COO for remaining Physics Department	Received	COMPLETED
18	RO	COO for remaining Medical Reactor - Covered Under Ph I	Users Excluded	INCLUDED IN COO MATRIX
19	RP	COO for remaining RHIC Project and Magnet Division	Received	COMPLETED
20	SC	Central Shops Division	??	??
21	SE	COO for remaining Safeguards and Security Div.	Received	COMPLETED
22	SEP	COO for remaining Safety and Environmental Protection	Received	COMPLETED
23	SS	COO for STAFF SERVICES: Auto, Gas Station, Cafe, Brookhaven Center, Storage,	Received	COMPLETED
24	SS	MIR	Received	COMPLETED

REVISIONS TO MATRIX/CHECKLIST:*

- S UPDATE YOUR MATRIX/CHECKLIST TO REFLECT ANY CHANGES IN YOUR OPERATING PRACTICES OR FACILITY CONFIGURATION**
- S AS A MINIMUM, SHALL REQUIRE APPROVAL BY THE FACILITY SUPERVISOR WHO IS RESPONSIBLE FOR THE OPERATION.**
- S SIGNIFICANT DEVIATIONS FROM THE APPROVED MATRIX/CHECKLIST SHALL BE SUBMITTED TO THE QMO. QMO ADVISES ADMPP IF BNL CONOPS COMMITTEE REVIEW IS NEEDED AND WHETHER RE-SUBMITTAL TO DOE/BHG IS REQUIRED.**

*Ref: BNL-O&M-I-02, Conduct of Operations Conformance Matrices (Self-Assessments), Para. 6.4

WHEN MUST CONOPS EVALUATIONS BE DONE?

- S CONOPS PROGRAM INITIATED 1990; FORMAL MATRICES SUBMITTED BETWEEN 1992 AND 1994**
- S FOR NEW, MODIFIED, OR REACTIVATED FACILITIES:**
 - NEW OR REVISED MATRICES SHALL BE COMPLETED BEFORE THE OPERATIONAL READINESS APPROVAL**

BNL ASSESSMENT PROGRAM

- S AS PART OF THE CONTINUOUS FORMAL AND INFORMAL MANAGEMENT ASSESSMENT OF FACILITY OPERATIONS PRACTICES, DEPT./DIV. SHOULD PERIODICALLY ASSESS**
 - FORMAL CONOPS PROGRAMS (MATRICES)**
 - INFORMAL CONOPS PROGRAMS (CHECKLISTS)**
- S ASSESSMENTS TO INCLUDE PERFORMANCE BASED ASSESSMENTS**

BNL ASSESSMENT PROGRAM

S TIER II - PERIODIC REVIEW OF THE DEPARTMENT OR DIVISION'S SELF-ASSESSMENT PROGRAM AND FACILITY OPERATIONS PRACTICES.

-- BY QMO

-- BY S&EP

-- BY OUTSIDE ASSESSORS

Ref: BNL-O&M-I-01, Conduct of Operations Implementation of DOE Order 5480.19

REFERENCE DOCUMENTS

BNL-O&M-0I-01 "CONDUCT OF OPERATIONS IMPLEMENTATION OF DOE ORDER 5480.19"
 BNL-O&M-0I-02 "CONDUCT OF OPERATIONS CONFORMANCE MATRICES (SELF ASSESSMENTS)"
 BNL-O&M-II-01 "USE OF GENERIC CONDUCT OF OPERATIONS PROGRAM FOR SMALL RESEARCH OPERATIONS"
 BNL-O&M-0I-02 "FACILITY MANUAL"
 BNL-O&M-II-03 "GUIDELINES FOR THE CONDUCT OF OPERATIONS FOR SMALL RESEARCH ORGANIZATIONS"
 BNL-O&M-III-00 "SUMMARY OF DOE ORDER 5480.19 "CONDUCTION OF OPERATIONS REQUIREMENTS FOR DOE FACILITIES"
 BNL-O&M-III-01 "DOE 5480.19, SUMMARY OF CHAPTER I OPERATIONS, ORGANIZATIONS, & ADMINISTRATION"
 BNL-O&M-III-02 "DOE 5480.19, SUMMARY OF CHAPTER II SHIFT ROUTINES AND OPERATING PRACTICES"
 BNL-O&M-III-03 "DOE 5480.19, SUMMARY OF CHAPTER III CONTROL AREA ACTIVITIES"
 BNL-O&M-III-04 "DOE 5480.19, SUMMARY OF CHAPTER IV COMMUNICATIONS"
 BNL-O&M-III-05 "DOE 5480.19, SUMMARY OF CHAPTER V CONTROL OF ON-SHIFT TRAINING"
 BNL-O&M-III-06 "DOE 5480.19, SUMMARY OF CHAPTER VI INVESTIGATION OF ABNORMAL EVENTS"
 BNL-O&M-III-07 "DOE 5480.19, SUMMARY OF CHAPTER VII NOTIFICATIONS"
 BNL-O&M-III-08 "DOE 5480.19, SUMMARY OF CHAPTER VIII CONTROL OF EQUIPMENT AND SYSTEM STATUS"
 BNL-O&M-III-09 "DOE 5480.19, SUMMARY OF CHAPTER IX LOCKOUTS AND TAGOUTS"
 BNL-O&M-III-10 "DOE 5480.19, SUMMARY OF CHAPTER X INDEPENDENT VERIFICATION"
 BNL-O&M-III-11 "DOE 5480.19, SUMMARY OF CHAPTER XI LOGKEEPING"
 BNL-O&M-III-12 "DOE 5480.19, SUMMARY OF CHAPTER XII OPERATIONS TURNOVER"
 BNL-O&M-III-13 "DOE 5480.19, SUMMARY OF CHAPTER XIII OPERATIONS ASPECTS OF FACILITY CHEMISTRY & UNIQUE PROCESSES"
 BNL-O&M-III-14 "DOE 5480.19, SUMMARY OF CHAPTER XIV REQUIRED READING"
 BNL-O&M-III-15 "DOE 5480.19, SUMMARY OF CHAPTER XV TIMELY ORDER TO OPERATORS"
 BNL-O&M-III-16 "DOE 5480.19, SUMMARY OF CHAPTER XVI OPERATIONS PROCEDURES"
 BNL-O&M-III-17 "DOE 5480.19, SUMMARY OF CHAPTER XVII OPERATOR AID POSTINGS"
 BNL-O&M-III-18 "DOE 5480.19, SUMMARY OF CHAPTER XVIII EQUIPMENT AND PIPING LABELING"